

Cumulative Effect of Substance Abuse Treatments on Long-term Outcomes

Christy K Scott, Ph.D.

Mark A. Foss, Ph.D.

Michael Dennis, Ph.D.

Chestnut Health Systems

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Rationale

- Long-term outcomes after an indexed treatment episode can be influenced by
 - Client characteristics
 - Aftercare activities
 - Treatment careers
- For many individuals substance abuse is a chronic condition requiring multiple treatment episodes; the effects of treatment may be cumulative

Rationale (cont.)

- An outcome can occur for many reasons. For example, abstinence at follow-up may be due to:
 - Treatment + client motivation
 - Presence in treatment
 - In a controlled environment

Study Objectives

- Investigate possible predictors of *Outcome Status*, focusing especially on the role of treatment history.
- Investigate possible predictors of abstinence in the community.

Study Design

- Long-term follow-up study of individuals (N=1,328) seeking publicly funded substance abuse treatment
- Sampled from a local area network of providers offering 6 levels-of-care
- Interviews conducted at assessment, 6 and 24 months following the assessment, additional interview waves are underway.

Study/Participant Characteristics

- 24-Month follow-up interviews were conducted on 92.1% (N=1,223) of participants
- Male: 41%, Female:59%
- African American:87%, Hispanic:7%, White: 5%
- Average Age: 35 years

Outcome Status

- “Outcome Status” was defined by five mutually exclusive and exhaustive categories:
 - In a controlled environment
 - In inpatient treatment
 - Receiving outpatient treatment
 - In community and not using
 - In community and using

Outcome Status (cont.)

- “Not Using” was defined as:
 - Not using an illegal drug or alcohol to intoxication in the 30 days prior to the 24-month follow-up interview and
 - Alcohol use on 15 or less days in the past 30 days

Analyses

- Multinomial Logistic Regression
 - Predicting “Outcome Status”
 - Predictors include participant characteristics, behaviors, criminal justice and treatment history
- Using PROC CATMOD, SAS[®] 8.0

Results

- Significant predictors of Outcome Status were:
 - Gender
 - Age
 - <35
 - 35+
 - Years of Regular Drug Use
 - <5
 - 5-9
 - 10+
 - Level-of-Care of Indexed Treatment
 - Outpatient or Intensive Outpatient
 - Methadone Outpatient
 - Short- or Long-term Residential or Halfway House

Results (cont.)

- Significant predictors (cont.)
 - Incarcerated in the 6-months Prior to Indexed Assessment
 - 12-Step Participation in 6-months Prior to Follow-up
 - Number of S/A Treatments Prior to Follow-up
 - None
 - One
 - Two or more

Predicting Outcome Status

Source	χ^2	df	p-value
Gender	15.1	4	0.045
Age	12.2	4	0.016
Regular Drug Use	21.2	8	0.007
LOC	27.4	8	<0.001
Incarceration	12.7	4	0.013
12-Step	72.7	4	<0.001
No. of Prior Tx	18.4	8	0.019

Gender × Outcome Status

Gender	Ctrl. Env.	Inpatient	Outpatient	In Com. Not using	In Com. Using	Marginal Percent
Male	23.3%	2.3%	2.3%	35.5%	36.7%	39.7%
Female	13.4%	1.5%	5.3%	40.0%	39.8%	60.3%

Age × Outcome Status

Age	Ctrl. Env.	Inpatient	Outpatient	In Com. Not using	In Com. Using	Marginal Percent
<35	20.8%	1.2%	4.2%	37.3%	36.5%	53.1%
35+	13.4%	2.4%	4.0%	39.2%	40.9%	46.9%

Years of Regular Drug Use × Outcome Status

Years	Ctrl. Env.	Inpatient	Outpatient	In Com. Not using	In Com. Using	Marginal Percent
<5	13.2%	1.5%	2.5%	47.5%	35.3%	16.7%
5-9	19.3%	1.8%	4.2%	40.2%	34.4%	27.1%
10+	17.6%	1.9%	4.5%	34.5%	41.6%	56.3%

Index LOC × Outcome Status

LOC	Ctrl. Env.	Inpatient	Outpatient	In Com. Not using	In Com. Using	Marginal Percent
Output.	22.5%	2.2%	2.9%	37.0%	35.5%	37.5%
OMT	13.3%	1.7%	8.1%	28.1%	48.5%	19.4%
Inpat.	14.4%	1.3%	3.3%	43.9%	37.2%	43.1%

Incarcerated × Outcome Status

Incar- cerated	Ctrl. Env.	Inpatient	Outpatient	In Com. Not using	In Com. Using	Marginal Percent
No	13.6%	1.9%	4.1%	40.1%	40.4%	75.2%
Yes	27.4%	1.7%	4.1%	31.4%	35.5%	24.6%

12-Step Involvement × Outcome Status

12-Step Inv.	Ctrl. Env.	Inpatient	Outpatient	In Com. Not using	In Com. Using	Marginal Percent
No	22.4%	0.3%	2.5%	29.2%	45.5%	51.8%
Yes	11.9%	3.4%	5.8%	47.8%	31.2%	48.2%

Number Prior Treatments × Outcome Status

No. Prior Tx	Ctrl. Env.	Inpatient	Outpatient	In Com. Not using	In Com. Using	Marginal Percent
None	24.3%	2.9%	1.9%	31.1%	39.8%	8.4%
1	18.5%	1.3%	1.7%	42.3%	36.3%	38.5%
2+	15.4%	2.0%	6.2%	36.4%	40.1%	53.1%

Analysis of Those in The Community

- Significant predictors of “Use”
 - {Age}
 - Year of Regular Drug Use
 - Level-of-Care Index Treatment
 - 12-Step Participation in 6-months Prior to Follow-up
 - Number of S/A Treatments Prior to Follow-up
 - Age \times Number of Prior S/A Treatments

Predicting Outcome Status

Source	χ^2	df	p-value
Age	0.01	1	0.905
Regular Drug Use	14.6	2	<0.001
LOC	12.2	2	0.002
12-Step	44.2	1	<0.001
No. of Prior Tx	14.6	2	<0.001
Age \times No. Prior	10.1	2	0.006

Age × Outcome Status

Age	In Com. Not Using	In Com. Using	Marginal Percent
<35	50.5%	49.5%	51.0%
35+	48.9%	51.1%	49.0%

Years of Regular Drug Use × Outcome Status

Years	In Com. Not Using	In Com. Using	Marginal Percent
<5	57.4%	42.6%	18.0%
5-9	53.9%	46.2%	26.3%
10+	45.3%	54.7%	55.7%

Index LOC × Outcome Status

LOC	In Com. Not Using	In Com. Using	Marginal Percent
Outpatient	51.1%	48.9%	35.3%
OMT	36.7%	63.3%	19.3%
Inpatient	54.1%	45.9%	45.4%

12-Step Involvement × Outcome Status

12-Step Inv.	In Com. Not Using	In Com. Using	Marginal Percent
No	39.1%	60.9%	50.4%
Yes	60.5%	39.5%	49.6%

Number of Prior Treatments × Outcome Status

No. Prior Tx	In Com. Not Using	In Com. Using	Marginal Percent
None	43.8%	56.2%	7.8%
1	53.8%	46.2%	39.4%
2+	47.6%	52.4%	52.8%

Age × Prior Treatment × Outcome Status

	Age <35				Age 35+		
	Number of Prior Tx				Number of Prior Tx		
Outcome Status	0	1	2+		0	1	2+
In Com. Not Using	46.5%	58.4%	44.8%		40.0%	48.6%	50.2%
In Com. Using	53.5%	41.6%	55.2%		60.0%	51.5%	49.8%
Marginal	9.0%	41.1%	49.9%		6.5%	37.6%	55.9%

Conclusions

- Substance use at outcome depends on the participants situation.
 - Different variables distinguishes those who have returned to treatment and those who are incarcerated.
 - Prior treatment is related to substance use in the community.
- A closer examination of participant in the community at follow-up reveal age and number of prior treatments
 - Among those who fail to enter treatment or had been in treatment only once, younger participants were more likely to be abstinent than older participants.
 - Among those with multiple treatment histories, older participants were more likely to be abstinent than younger participants.

Conclusions (cont.)

- The effect of the number of prior treatments on outcome would appear to be complex and related to other participant characteristics.
- The number of prior treatments may say more about the participant than about any cumulative effect of treatment.